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In re Application: Ian Charles OGILVY

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For: METHOD AND APPARATUS OF  
CONTROLLING COMMUNICATIONS

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**ABSTRACT-CLEAN VERSION**

The present invention relates generally to a method and apparatus for preparing and processing information to be sent or received via a network, or communicated to or from other data carriers such as smart cards.

The present invention describes the construction of a novel "virtual machine" which can be implemented on a device having a minimal amount of hardware, such as hardware which is used for processing payment transactions (EFTPOS and the like). Prior art virtual machines tend to slow down operation of the device, as they are effectively acting as an interface between an applications program and the actual device drivers. This is a problem.

The virtual machine of the device of the present invention incorporates a virtual message processing means, which is arranged to construct, deconstruct and compare messages and which is applied in the native code of the processor. The message instruction means are provided in the application to direct and control the message processor. Similarly, a protocol processor means is provided in the virtual machine for governing and organizing communications, under the direction of a protocol instruction means in the application. The provision of these elements increases the speed and efficiency of the virtual machine and allows implementation of a practical device for use in communications, able to be implemented on different hardware having different BIOS/OS.